

WHAT IS CLAIMED IS:

1. In an apparatus for braking a track on a vehicle comprising:
a rotatable track mounted to the vehicle for moving the vehicle;
a shaft coupled to said vehicle and engaged with said track, said track having a shared axis of rotation with said shaft; and,
a braking means connected to said shaft and coupled to said vehicle for retarding movement of said track.
2. The apparatus of claim 2 wherein said braking means is a disc brake assembly comprising a disc secured to said shaft with at least one reciprocating piston being coupled to said vehicle and functionally engagable with said disc.
3. The apparatus of claim 2 including at least one sprocket secured to said shaft and engaged with said track.
4. The apparatus of claim 3 including a prime mover that is coupled to said shaft.
5. The apparatus of claim 4 including a transmission that interconnects said prime mover and said shaft.
6. The apparatus of claim 5 including a body portion secured to said vehicle that contains said piston.
7. The apparatus of claim 6 including a bearing housing secured to said body portion containing at least a first bearing unit coupled to said shaft.

8. The apparatus of claim 7 including a second bearing unit coupled to said shaft and spaced-apart from said first bearing unit by an effective amount to prevent yaw of said body portion with respect to said shaft.

9. The apparatus of claim 7 wherein said first bearing unit and said second bearing unit are located on said shaft between said sprocket and said disc.

10. The apparatus of claim 9 including a partition that is secured to said vehicle, said partition supporting said disc brake assembly and separating said track from said disc brake assembly.

11. The apparatus of claim 10 wherein said disc brake assembly has cooling fins and portions of said partition have openings, said fins extending into said openings to provide passage of air over said fins.

12. In a braking assembly coupled to a vehicle for braking a vehicular track
said assembly comprising:

a first body portion having a first piston bore;

a first piston slidably engaged in said first piston bore and having a first free end;

a second body portion attached to said first body portion and having a second piston bore;

a second piston slidably engaged in said second piston bore and having a second free end;

said first body portion and said second body portion being juxtaposed to locate said first free end opposite from said second free end by a predetermined distance;

a bearing housing with a bearing bore having one or more bearings inserted; and,

said bearing housing being attached to one or both of said first and said second body portions such that the centerline of said bearing bore is parallel to the centerlines of each of said piston bores.

13. The apparatus of claim 12 including a shaft rotatably supported by said bearings.

14. The apparatus of claim 13 including a brake disc connected to said shaft wherein a peripheral portion of said disc is interposed between said pistons.

15. The apparatus of claim 14 wherein two bearings are positioned in said bearing bore, said bearing bore including one or more spacers interposed between said two bearings for increasing a moment force resisting yaw between said braking assembly and said shaft.

16. The apparatus of claim 15 wherein said bearings are anti-friction bearings.

17. In a braking assembly coupled to a vehicle for braking a vehicular track said assembly comprising:

a first body portion having a piston bore;

a piston slidably engaged in said piston bore and having a free end;

a second body portion attached to said first body portion and having a surface opposed to said free end and a centerline normal to said surface that passes through a central area of said surface;

a bearing housing with a bearing bore having one or more bearings inserted; and,

said bearing housing being attached to one or both of said body portions such that the centerline of said bearing bore is parallel to the centerlines of said piston bore and said surface.

18. The apparatus of claim 17 including a shaft rotatably supported by said bearings.

19. The apparatus of claim 18 including a brake disc connected to said shaft wherein a peripheral portion of said disc is interposed between said pistons.

20. The apparatus of claim 19 wherein a spacer is interposed between said bearings for increasing a moment force resisting yaw between said braking assembly and said shaft.

21. The apparatus of claim 20 wherein said bearings are anti-friction bearings.

22. A method of braking a track drive shaft comprising the steps of:
mounting a brake disc having an outer radial portion on said track drive shaft;
interposing said radial portion between opposed friction pads between opposed pistons located in a braking assembly; and,
causing said pistons to cause said friction pads to frictionally engage said radial portion by a selected amount to retard rotation of said drive shaft.

23. The method of claim 22 whereby said track drive shaft is rotatably supported by one or more bearings housed within said braking assembly.

24. The method of claim 23 whereby yaw between said track drive shaft and said braking assembly is resisted by transferring forces at an interface between said track drive shaft and said bearings.

25. The method of claim 24 further comprising:
interposing one or more spacers between bearings in a braking assembly including two or more bearings.

26. The method of claim 25 further comprising:
adjusting the length of said spacers to adjust the level of resistance to said yaw.